

### Summary

Corona shielding arrangement and techniques to fabricate it

The invention relates to a corona shielding arrangement for the stator winding of rotating high-voltage machines with round-wire winding combined with a slot portion insulation and a technique to fabricate the corona shielding arrangement. It is an object of this invention to provide an overhang corona shielding and a technique for its fabrication relating to a stator winding which safely controls the electric stresses occurring at the slot end, primarily during power-frequency and impulse voltage testing as well as during switching operations during service. It is a further object of this invention to improve the contact between slot portion and overhang corona shielding and to allow higher partial-discharge inception voltages. According to the present invention the corona shielding arrangement for the stator winding is designed so that conducting and semi-conducting corona shielding materials are arranged both outside the laminated stator core and inside the laminated stator core wherein the semi-conducting material used for the overhang corona shielding consists of monoplane semi-conducting corona shielding material, cut into strips, and arranged on either side at slot level and, if required, also on the bottom of the slot on top of the slot lining. The point of contact between conducting and semi-conducting corona shielding material is located within the laminated stator core. According to the present technique the semi-conducting corona shielding materials to be arranged on the conducting corona-shielding material are glued on only partially. Subsequently the winding is drop-fed into the slots through the slot opening. Then the end winding is wrapped wherein the slot lining protruding from the slot is also insulated up to the laminated stator core. In doing so the semi-conducting corona shielding material must be kept away from the slot lining. Upon completion of this operation, the semi-conducting corona shielding material is applied to the end winding insulation and fastened with adhesive tape or cover tape which is applied on top of the end winding insulation.